

ABSTRACT OF THE DISCLOSURE

A multi-array membrane strip biosensor device (10, 20) using a fluid mobile conductive polymer as reporter is described. The biosensor device (20) is designed to detect multiple analytes at low concentrations in near real-time with an electronic data collection system. The biosensor device can be small. The device can be used to detect pathogens, proteins, and other biological materials of interest in food, water, and environmental samples. The device can also be used for on-site diagnosis and against potential bioterrorism. Potential users include food processing plants, meat packaging facilities, fruit and vegetable packers, restaurants, food and water safety inspectors, food wholesalers and retailers, farms, homes, medical profession, import border crossing personnel, and the police force, military, space habitation and national security.